

PATENT COOPERATION TREATY

REC'D 29 JUL 2005

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From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/000580

International filing date (day/month/year)
18.02.2005

Priority date (day/month/year)
20.02.2004

International Patent Classification (IPC) or both national classification and IPC
B42D15/00

Applicant
DE LA RUE INTERNATIONAL LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/000580

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/000580

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-33
	No: Claims	34,35
Inventive step (IS)	Yes: Claims	1-33
	No: Claims	34,35
Industrial applicability (IA)	Yes: Claims	1-35
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1) Reference is made to the following documents:

D1 : US 1 996 539 A (LOUIS DUFAY) 2 April 1935 (1935-04-02)

2) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 34 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document):

A security device comprising a substrate having a reflective portion (Page 2, col. 2, line 71) which is provided with a raised line structure (Fig. 1 and 2), the line structure defining a plurality of segments (14-17), each segment being formed by a respective set of substantially (vague term) parallel embossed (Page 3, col. 1, lines 14-21) lines (fig. 1 and 2), the lines of at least five (Fig. 9) segments (Fig. 6) extending in different directions, wherein each segment causes incident light to be reflected non-diffractively in a variable manner as the angle of incidence changes (Page 3, col. 1, lines 46-61). (cf claim 34).

3) Dependent claim 35, when dependent on claim 34, also appears not to be novel.

4) Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parentheses applying to this document):

A security device comprising a substrate having a reflective portion (Page 2, col. 2, line 71) which is provided with a raised line structure (Fig. 1 and 2), the line structure defining a plurality of segments (14-17), each segment being formed by a respective set of substantially (vague term) parallel raised lines (fig. 1 and 2), the lines of at least three segments (Fig. 6) extending in different directions, wherein each segment causes incident light to be reflected non-diffractively in a variable manner as the angle of incidence changes (Page 3, col. 1, lines 46-61). (cf claim 1).

From this, the subject-matter of independent claim 1 differs in that:

each line is formed by or carries an ink which does not fully extend into the spaces between the lines or which is sufficiently translucent between the lines so as not to obscure the reflective surface between the lines.

The subject-matter of claim 1 is therefore novel (Article 33(2) PCT)

**WRITTEN OPINION OF THE
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AUTHORITY (SEPARATE SHEET)**

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5) The problem to be solved by the present invention may be regarded as the improved security of security documents against forgery.

6) The problem is solved by applying an ink which does not fully extend into the spaces between the lines or which is sufficiently translucent between the lines so as not to obscure the reflective surface between the lines.

7) The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
No available document shows the claimed solution to this problem. Nothing appears to lead a person skilled in the art to the claimed solution.

8) The analysis of paragraphs 4 to 7 applies mutatis mutandis to method claim 30, which, therefore, meets the requirements of the PCT with respect to novelty and inventive step.

7) Claims 2-29, 31-33 and 35 (when dependent on any of claims 1-29 or 30-33) are dependent on claim 1 and 30 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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INTERNATIONAL SEARCH REPORT

PCT/GB2005/000580

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B42D15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B42D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 1 996 539 A (LOUIS DUFAY) 2 April 1935 (1935-04-02) cited in the application page 3, column 1, line 8 - column 2, line 36; figures 1,2,6,9	34
A	WO 03/057494 A (PLASCHKA REINHARD ; BRAUN ECKHARD (DE); GIESECKE & DEVRIENT GMBH (DE)) 17 July 2003 (2003-07-17) page 8, line 20 - page 9, line 9; figures 1,2,5	1,27,30, 34,35
A	WO 01/49505 A (BRAUN ECKHARD ; FRANZ PETER (DE); ADAMCZYK ROGER (DE); MAYER KARLHEINZ) 12 July 2001 (2001-07-12) page 12, line 16 - page 13, line 4; figure 4	1,27,30, 34,35
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

19 July 2005

Date of mailing of the international search report

02/08/2005

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INTERNATIONAL SEARCH REPORT

PCT/GB2005/000580

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/20274 A (PLASCHKA REINHARD ; FRANZ PETER (DE); ADAMCZYK ROGER (DE); MAYER KARLH) 14 March 2002 (2002-03-14) page 17, line 7 - line 22; figure 2 -----	1,27,30, 34,35
A	WO 95/16574 A (KURZ LEONHARD FA ; HERRMANN JUERGEN (DE); REINHART WERNER (DE)) 22 June 1995 (1995-06-22) page 15, line 17 - line 26; figure 3 -----	1
A	WO 02/20280 A (PLASCHKA REINHARD ; MUELLER JOHANN (DE); ZERBES JUERGEN (DE); BALDUS C) 14 March 2002 (2002-03-14) page 15, line 28 - page 18, line 14; figures 1,2 -----	1
A	MOSER: "interplay of a multiplicity of security features" OPTICAL SECURITY AND COUNTERFEIT DETERRENCE TECHNIQUES III, vol. 3973, 27 January 2000 (2000-01-27), - 28 January 2000 (2000-01-28) pages 47-54, XP002297588 SAN JOSE CALIFORNIA USA page 48 - page 50 -----	1

INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1996539	A	02-04-1935	NONE	
WO 03057494	A	17-07-2003	DE 10201032 A1 AU 2003205579 A1 CA 2472020 A1 CN 1592688 A WO 03057494 A1 EP 1467871 A1 US 2005072326 A1	24-07-2003 24-07-2003 17-07-2003 09-03-2005 17-07-2003 20-10-2004 07-04-2005
WO 0149505	A	12-07-2001	DE 19963849 A1 AU 772672 B2 AU 3164901 A BR 0016887 A CA 2395964 A1 CN 1414912 A WO 0149505 A1 EP 1268213 A1 JP 2003519034 T MX PA02006507 A PL 358721 A1 US 2003145747 A1 ZA 200204748 A	12-07-2001 06-05-2004 16-07-2001 01-10-2002 12-07-2001 30-04-2003 12-07-2001 02-01-2003 17-06-2003 12-02-2003 09-08-2004 07-08-2003 08-04-2004
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WO 9516574	A	22-06-1995	DE 4343387 A1 AU 1105195 A WO 9516574 A1 TW 383108 Y	29-06-1995 03-07-1995 22-06-1995 21-02-2000
WO 0220280	A	14-03-2002	DE 10044465 A1 AU 1388802 A CA 2421101 A1 CN 1452566 A WO 0220280 A1 EP 1317351 A1 PL 359706 A1	21-03-2002 22-03-2002 04-03-2003 29-10-2003 14-03-2002 11-06-2003 06-09-2004